

REMARKS

The Official Action mailed November 14, 2005, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on November 14, 2003; and September 9, 2005. However, the Applicants have not received acknowledgment of the Information Disclosure Statement filed on January 22, 2004 (received by OIPE January 26, 2004). The above-referenced Information Disclosure Statement appears in the Image File Wrapper. A courtesy copy of the Form PTO-1449 is attached herewith. The Applicants respectfully request that the Examiner provide an initialed copy of the Form PTO-1449 evidencing consideration of this Information Disclosure Statement.

A further Information Disclosure Statement is submitted herewith and consideration of this Information Disclosure Statement is respectfully requested.

Claims 1-21 are pending in the present application, of which claims 1, 3, 5, 8, 11, 14 and 18 are independent. Claims 1, 5, 11 and 18 have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 5 and 6 as anticipated by JP 11-204433 to Kensaku Yano (referred to as "Kensaku" in the Official Action). The Applicants respectfully submit that an anticipation rejection cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP § 2131, to establish an anticipation rejection, each and every element as set forth in the claim must be described either expressly or inherently in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claim 5 has been amended to recite floating a substrate. Kensaku does not teach floating a substrate, either explicitly or inherently.

Since Kensaku does not teach all the elements of the independent claims, either explicitly or inherently, an anticipation rejection cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 are in order and respectfully requested.

The Official Action rejects claims 1-4 and 7-21 as obvious based on Kensaku, either alone or in combination with one or more of the following: U.S. Patent Application Publication No. 2003/0031214 to Tanaka et al., U.S. Patent No. 6,927,109 to Tanaka et al., JP 2001-085354 to Yamazaki et al., U.S. Patent No. 5,432,122 to Chae, U.S. Patent No. 5,147,826 to Liu et al., and U.S. Patent No. 6,027,960 to Kusumoto et al. With respect to independent claims 1, 5, 11 and 18, the Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended. With respect to independent claims 3, 8 and 14, the Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole

would have suggested to those of ordinary skill in the art.” In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Kensaku and one or more of Tanaka ‘214, Tanaka ‘109, Yamazaki, Chae, Liu and Kusumoto or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be used together, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

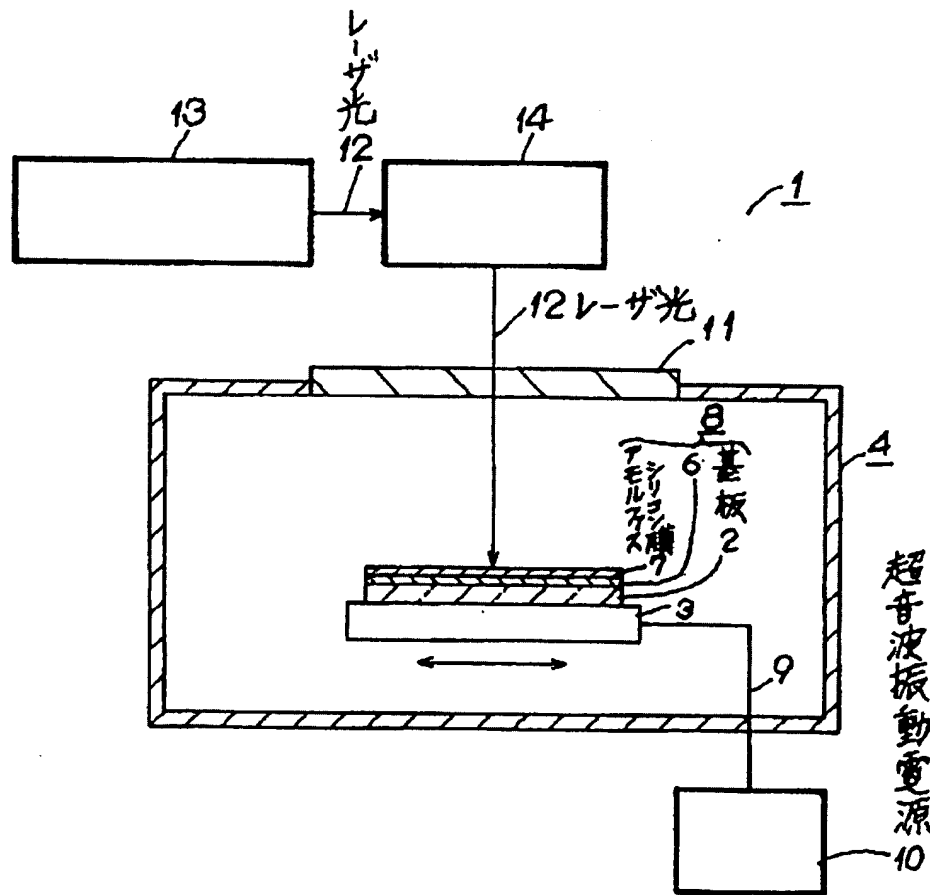
The test for obviousness is not whether the references “could have been” combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis in original). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

The independent claims have either been amended to recite or already recite applying ultrasonic vibration to a substrate during irradiation of a laser beam and while floating the substrate. The Official Action concedes that Kensaku does not teach floating a substrate (page 4, Paper No. 1105). The Official Action relies on Tanaka ‘214 to allegedly teach floating a substrate (Id.). Without support from the prior art, the

Official Action asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Kensaku so as to hold the substrate as disclosed by Tanaka et al. because such a method allows for adequate controlled crystallization of the semiconductor film" (*Id.*). The Applicants respectfully disagree and traverse the above assertions in the Official Action.

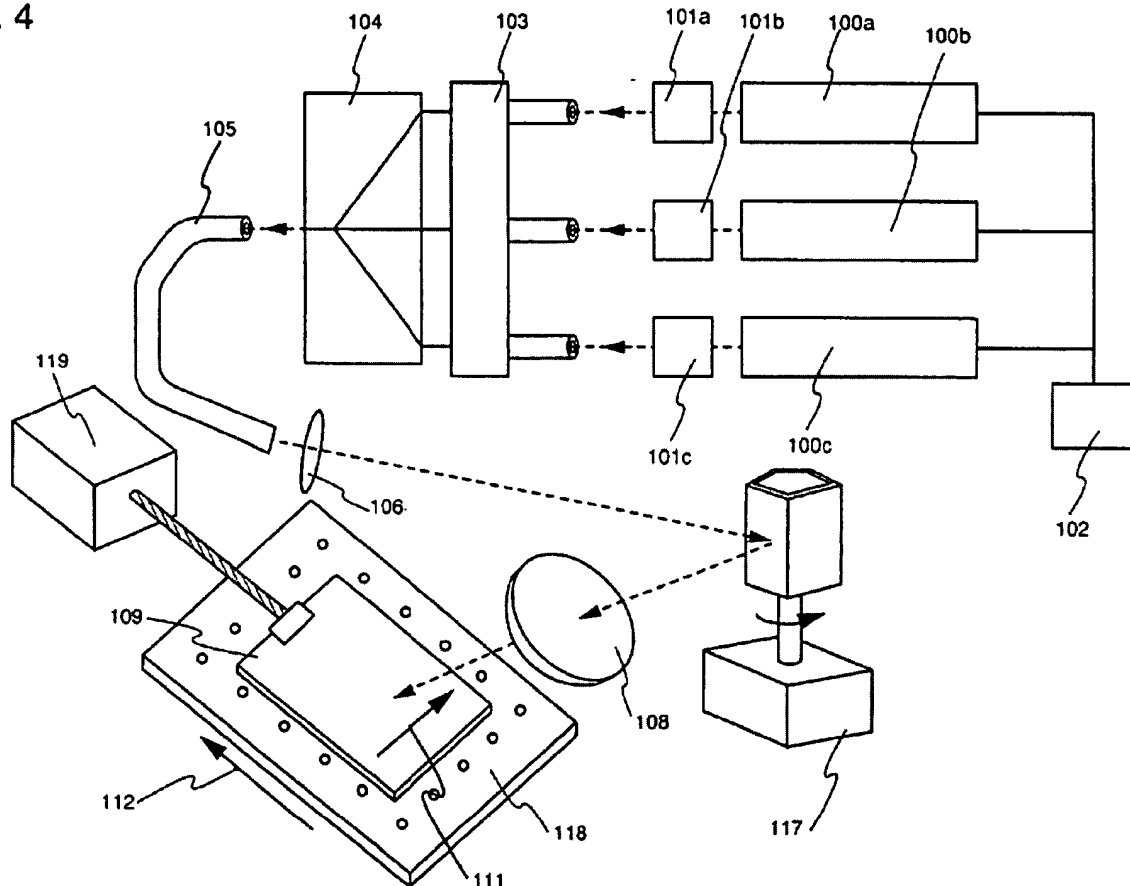
Kensaku appears to teach placement of a substrate 8 directly on a stage 3 (abstract; Figure 1, reproduced below).

【図1】



Tanaka '214 appears to teach a substrate 109 floated by the pressure of jetted gas from stage 118 (Embodiment 4, paragraph [0088]; Figure 4, reproduced below).

FIG. 4



However, the Official Action has not shown why one of ordinary skill in the art at the time of the present invention would have replaced Kensaku's preferred method of placing substrate 8 directly on stage 3 with Tanaka's method of using a floating substrate 109 and a jetted stage 118.

The present inventors have found that the application of ultrasonic vibration to a substrate is more effective when floating the substrate. As noted in the present specification, “in the case of using a method to connect a ultrasonic vibration source with a stage on which a glass substrate is mounted, ultrasonic vibration source can not adhere to the stage because of a curve on the glass substrate, and ultrasonic vibration

can not propagate efficiently" (page 3, lines 14-17). The prior art does not recognize such an advantage, nor does the prior art provide any other reason why the references should have been combined in order to achieve the features of the independent claims of the present application.

Although Tanaka '214 appears to teach floating a substrate, Tanaka '214 does not show why it would have been obvious to float a substrate while applying ultrasonic vibration to a substrate. Also, the Official Action does not provide any support from the references for the alleged motivation that a method of floating a substrate "allows for adequate controlled crystallization of the semiconductor film." In any event, it is not clear why one of ordinary skill in the art who was concerned with "adequate controlled crystallization of the semiconductor film" would not have simply practiced Tanaka '214 alone.

Tanaka '109, Yamazaki, Chae, Liu and Kusumoto do not cure the deficiencies in the alleged motivation to combine Kensaku and Tanaka '214. The Official Action relies on Tanaka '109 and Yamazaki to allegedly teach holding an end portion of a film (page 3, Paper No. 1105), on Chae to allegedly teach overlapping a beam of spot lasers (page 4, Id.), on Liu to allegedly teach adding a metal element for enhancing crystallization (page 5, Id.), and on Kusumoto to allegedly teach laser annealing in an oxygen atmosphere (page 6, Id.). However, Tanaka '109, Yamazaki, Chae, Liu and Kusumoto do not show that why it would have been obvious to replace substrate 8 and stage 3 of Kensaku with substrate 109 and stage 118 of Tanaka '214.

Therefore, the Applicant respectfully submits that the Official Action has not provided a proper or sufficient suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Kensaku and one or more of Tanaka '214, Tanaka '109, Yamazaki, Chae, Liu and Kusumoto or to combine reference teachings to achieve the claimed invention.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed

invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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| Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i> | | | | Complete if Known | |
| | | | | Application Number | 10/706,978 |
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| Sheet | 1 | of | 1 | | |

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